



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,114	11/26/2003	Anand Hariraj Udupa	TI-37239	1319
23494	7590	09/20/2005		
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			EXAMINER ANDUJAR, LEONARDO	
			ART UNIT	PAPER NUMBER
			2826	
DATE MAILED: 09/20/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/723,114

Applicant(s)

UDUPA ET AL.

Examiner

Leonardo Andújar

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06/28/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Acknowledgment***

1. The amendment filed on 06/28/2005 in response to the Office action mailed on 03/14/2005 has been entered. The present Office action is made with all the suggested amendments being fully considered. Accordingly, pending in this Office action are claims 1-18.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-7, 9-16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ibnabdeljalil et al. (US 6,365,958).

4. Regarding claims 1 and 10, Ibnabdeljalil (e.g. fig. 7A-C) shows an integrated circuit 73a; a first scribe seal 104 around the integrated circuit; and a second seal 106 around the first scribe seal to provide mechanical strength to the integrated circuit wherein all of the integrated circuit, the first scribe and the second scribe seal are laid on a common substrate (col. 4/lis. 18-33). Regarding claim 10, device of claim 1 would necessarily have to be formed in order to function. Claim 10 fails to further limit the devices of claim 1 other than simply form each of their components. The first scribe

prevents the movement of ions into the integrated circuit (col. 4/lls. 20-25). Note the scribe 104 is connected to the doped regions.

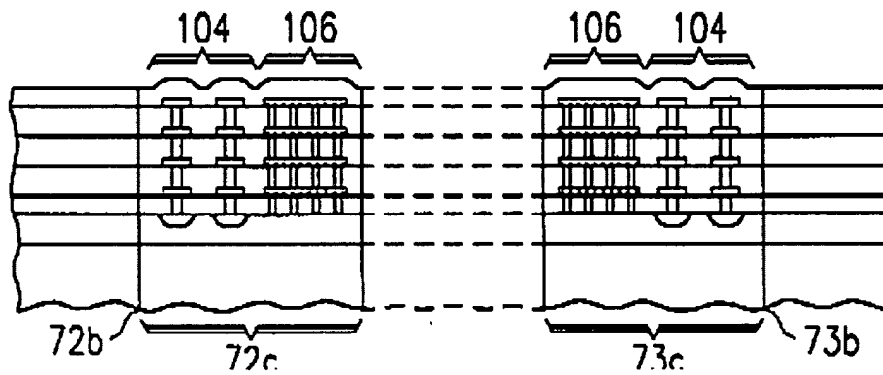


FIG. 7C

5. Regarding claims 2 and 11, Ibnabdeljalil shows that the first scribe seal comprises a first plurality of layers and the second scribe seal comprises a second plurality of layers wherein the first plurality of layers are laid differently than the second plurality of layers. Note that they are different in length. Regarding claim 11, device of claim 2 would necessarily have to be formed in order to function. Claim 11 fails to further limit the devices of claim 2 other than simply form each of their components.

6. Regarding claims 3 and 12, Ibnabdeljalil teaches that the first scribe prevents entry of mobile ions into the integrated circuit, the second scribe seal provides mechanical strength to the die, and both of the first scribe and the second scribe seal provide respective high resistance paths along the common substrate (col. 3/lls. 14-30; col. 7/lls. 9-23 & col. 12/lls. 26-39). Regarding claim 12, device of claim 3 would necessarily have to be formed in order to function. Claim 12 fails to further limit the devices of claim 3 other than simply form each of their components.

7. Regarding claims 4 and 13, Ibnabdeljalil (e.g. fig. 3 & 4) teaches that the first scribe comprises a thin metal to provide high resistance path (inherent); and a metal

layer and a via layer together forming a wall in an oxide layer wherein the wall prevents the entry of mobile ions into the integrated circuit (col. 3/lis. 14-30; col. 7/lis. 9-23; col. 9/lis. 5-20 & col. 12/lis. 26-39). Regarding claim 13, device of claim 4 would necessarily have to be formed in order to function. Claim 13 fails to further limit the devices of claim 4 other than simply form each of their components.

8. Regarding claims 5 and 14, Ibnabdeljalil (e.g. fig. 7C) teaches that the second scribe seal comprise a thick metal layer providing mechanical strength to the die wherein the thick metal layer is not connected to the common substrate provide high resistance path to the common substrate (col. 3/lis. 14-30; col. 7/lis. 9-23 & col. 12/lis. 26-39). Regarding claim 14, device of claim 5 would necessarily have to be formed in order to function. Claim 14 fails to further limit the devices of claim 5 other than simply form each of their components.

9. Regarding claims 6 and 15, Ibnabdeljalil shows that the second scribe does not include a diffusion layer. Regarding claim 15, device of claim 6 would necessarily have to be formed in order to function. Claim 15 fails to further limit the devices of claim 6 other than simply form each of their components.

10. Regarding claims 7 and 16, Ibnabdeljalil shows that the second scribe does not include a contact layer. Regarding claim 16, device of claim 7 would necessarily have to be formed in order to function. Claim 16 fails to further limit the devices of claim 7 other than simply form each of their components.

11. Regarding claims 9 and 18, Ibnabdeljalil shows a gap separating the first scribe from the second scribe seal. Regarding claim 18, device of claim 9 would necessarily

have to be formed in order to function. Claim 18 fails to further limit the devices of claim 9 other than simply form each of their components.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibnabdeljalil et al. (US 6,365,958) in view of Applicant Admitted Prior Art (hereafter APA) further in view of Sessions (US 20020184558).

15. Regarding claims 8 and 17, Ibnabdeljalil teaches most aspects of the instant invention except for an integrated circuit comprising an analog portion and a digital portion. However, APA (e.g. fig. 2A) shows an integrated circuit having an analog portion 210 and a digital portion 220 whereas Sessions teaches that digital and analog

Art Unit: 2826

circuits are conventionally combined on a single integrated circuit ("IC") chip in order to achieve a number of advantages, such as lower cost, increased performance and further system miniaturization (pp 0002). Regarding claim 17, device of claim 8 would necessarily have to be formed in order to function. Claim 17 fails to further limit the devices of claim 8 other than simply form each of their components. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an analog portion and a digital portion in the circuit disclosed by Ibnabdeljalil as in accordance with APA's teachings in order to achieve a number of advantages, such as lower cost, increased performance and further system miniaturization as taught by Sessions.

### ***Response to Arguments***

16. Applicant's arguments filed on 06/28/2005 have been fully considered but they are not persuasive.

17. Applicant argues that the prior art does not show a first scribe seal around the integrated circuit to prevent mobile ions for entering to the integrated circuit and a second scribe seal around the first scribe to provide mechanical strength to the integrated circuit. Nevertheless, Ibnabdeljalil clearly teaches that the first scribe 104 prevents the movement of ions into the integrated circuit (col. 4/lis. 20-25). Note the scribe 104 is connected to the doped regions. Furthermore, the second scribe provides mechanical strength to the integrated circuit (col. 4/lis. 24-33).

### ***Conclusion***

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonardo Andújar whose telephone number is 571-272-1912. The examiner can normally be reached on Mon through Thu from 9:00 AM to 7:30 PM EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

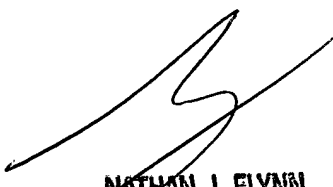
20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should



Art Unit: 2826

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leonardo Andújar  
Patent Examiner  
Art Unit 2826  
09/17/2005



NATHAN J. FLYNN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800